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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,833	01/25/2001	Carl S. Brown	11532-003001	7286

7590

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JAMES T. HAGLER  
Fish & Richardson P.C.  
4350 La Jolla Village Drive, Suite 500  
San Diego, CA 92122

EXAMINER

CHOOBIN, BARRY

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 09/16/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/770,833

Applicant(s)

BROWN ET AL.

Examiner

Barry Choobin

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,7,9-11 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 3-6,8,12-16 and 20-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on March 4, 2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Objections***

2. Claims 11 and 17 are objected to because of the following informalities: in claim 11, line 2 "the of the image" should be *-of the image-*.

In claim 17, line 2, "the of the image" should be *-of the image-*.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 11 recites the limitation "the average" in line 4. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 17 recites the limitation "the slop" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being by Wayne F. Patton (Biologist's perspective on analytical imaging systems as applied to protein gel electrophoresis). Applicant's admitted prior art.

As to claim 1, Patton discloses a method of determining a background intensity an image comprising; selecting a plurality of spots within the image falling within a least squares curve fit (see page 71, paragraph 5.1. background determination, lines 1- 10); determining constant background intensity for the spots within the curve fit (see page 71, paragraph 5.1. background determination, lines 1- 10).

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the

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applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 7 and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Hamamura et al (US Patent 6,411,741).

As to claims 7 and 17, Hamamura et al disclose an image processing apparatus comprising: determining a coefficient of variation for the micro array scan (column 14, lines 9-21);

comparing the coefficient of variation to a predetermined threshold (column 14, lines 9-21);

selecting a micro array scan if the coefficient of variation is lower than the predetermined threshold (column 14, lines 9-21).

As to claim 18, Hamamura et al disclose plotting each covariance value versus the average variance value (see Figs 6 and 9, column 8, lines 27-40).

As to claim 19, Hamamura et al disclose ignoring data points not along the slope of the covariance plotted against variance (column 8, lines 25).

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Ennis (US Patent 5,208,870).

As to claim 11, Ennis discloses a method for extracting data from an image comprising; determining a covariance and a variance of the image (column 3, line 65 through column 4, line 11);

Normalizing the covariance (column 3, line 65 through column 4, line 11);

Determining the average and standard deviation of the covariance (column 3, line 65 through column 4, line 11);

Selecting the data based on the average and standard deviation of the covariance (column 3, line 65 through column 4, line 11).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wayne Patton in view of Hochman (US 6,319,682).

As to claim 2, Patton discloses the method of claim 1 (see claim 1), but Patton fails to disclose determining a ratio an experimental image to a control image.

But on the other hand, Hochman discloses optical detection techniques for the physiological state comprising determining a ratio an experimental image to a control image (column 40, lines 3-35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the technique of Hochman with the work of Patton in order to increase the signal to noise ratio.

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamamura et al in view of Bao et al (US 6,251,601).

As to claim 9, Hamamura et al disclose the method of claim 7 (see claim 7), but Hamamura et al fail to disclose determining a spot coefficient of variation.

On the other hand, Bao et al disclose determining a spot coefficient of variation (column 16, lines 15-35). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the image analysis algorithms of Bao et al with the work of Hamamura et al in order to calculate the standard deviation of the volume-weighted average of the image, and the percentage of the value obtained by dividing the standard deviation by the volume-weighted average (coefficient of Variation ).

As to claim 10, Bao et al disclose an average coefficient of variation (column 16, lines 15-35).



***Allowable Subject Matter***

16. Claims 3-6, 8, 12-16 and 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A: US 2003/0068082 to Comaniciu et al.

B: US 2002/0028021 to Foote et al.

C: US 6,564,082 to Zhu.

D: US 6,404,925 to Foote et al.

E: US 6,245,517 to Chen et al.

F: US 6,285,449 to Ellingson et al.

***CONTACT INFORMATION***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry Choobin whose telephone number is 703-306-5787. The examiner can normally be reached on M-F 7:30 AM to 18:30 PM.

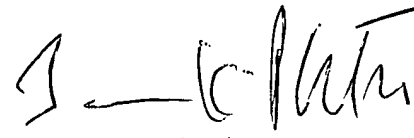
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 703-308-5246. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Barry choobin

September 2, 2003

A handwritten signature in black ink, appearing to read "Jayanti K. Patel", with a long horizontal line extending from the end of the signature.

Jayanti K. Patel  
Primary Examiner